

STUDENT NAME \_\_\_\_\_ DATE \_\_\_\_\_

## BIOTECHNOLOGY and BIOMANUFACTURING A.A.S. at CCBC to B.T.P.S. IN BIOTECHNOLOGY AT UMUC

This worksheet is designed to help you plan and track your progress toward your degrees. For full course descriptions, please refer to the current undergraduate *Catalog*.

### Courses taken at Community College Baltimore County

*Changes in recommended courses may affect other elements of the degree plan. Lower level equivalents of UMUC upper level courses fulfill content requirements but not upper-level minimum credit requirements*

UMUC  
Equivalent  
Course

GENERAL EDUCATION REQUIREMENTS (GER) (27 credits)		
Speech/writing GER	SPCM 101 Fundamentals of Speech Communication (3)	SPCH 100
WRTG 101 Writing GER	ENGL 101 College Composition I (3)	WRTG 101
Biological and Physical Sciences GER	BIOL 110 Biology I: Molecular and Cells (4)	
Mathematics GER	MATH 153 Introduction to Statistical Methods (4)	STAT 200
First social and behavioral sciences GER	POLS 131, PSYC 105, SOCL 141, SOCL 230, or WMST 101 (3) <i>Recommended Social and Behavioral Sciences course. Fulfills Diversity course requirement</i>	
First arts and humanities GER	ARTS 105, ARTS 106, or HIST 102 or other approved HIST (3) <i>Recommended Arts and Humanities or Social and Behavioral Sciences GER Elective.</i>	
Biological and Physical Sciences with lab GER	CHEM 146/147 Introduction to Organic and Biochemistry and Lab (4)	
English Writing GER	ENGL 102 College Composition II (3) <i>Recommended program elective</i>	
INTERDISCIPLINARY AND EMERGING ISSUES (3-4 credits)		
ACDV 101 (0-1)	<i>As of spring 2010 new/first time students will be required to take ACDV101 during their 1<sup>st</sup> semester at CCBC</i>	
CINS 101	Introduction to Computers (3) <i>Recommended Information Technology GER. Required computing GER at UMUC</i>	IFSM 201
BIOTECHNOLOGY RELATED COURSES (25 credits)		
BIOL 120	Introduction to Biotechnology (4)	
CHEM 121 and CHEM 122	General Chemistry I and Laboratory (4)	CHEM 131
◆ BIOL 251(4)		◆
◆ BIOL 253	Techniques in Biotechnology I (5)	◆
◆ BIOL 254	Techniques in Biotechnology II (5)	◆
BIOL 283-6	Cooperative Education II: Biology (3)	
PROGRAM ELECTIVES (7 credits)		
◆ BIOL 230 (4)	<i>Recommended program elective. Required for major</i>	◆
CHEM 123/124, 200/201, 202/203; PHYS 101, 102; CINS 155, 142 (3)	<i>Program elective</i>	
<b>Credits transferred: 62-63 credits</b>		

**SEQUENCE at UMUC**

*Courses are listed in the order in which students should take them.  
Changes in courses and order may affect other elements of the degree plan.*

**NOTES**

<b>ADDITIONAL REQUIRED GENERAL EDUCATION COURSES FOR DEGREE (9 credits)</b>		
Mathematics GER	MATH 106 (3) <i>Or other more advanced MATH GER</i>	
Second social and behavioral sciences GER	ANTH 344 (3) <i>Or other upper-level behavioral/social science from a second discipline</i>	UL
Second arts and humanities GER	PHIL 315 (3) <i>Or other upper-level arts/humanities from a second discipline</i>	UL
<b>EMERGING ISSUES (4 credits)</b> If requirement is completed in degree at community college, these credits may be used for electives		
LIBS 150 (1) <i>Required GER course</i>		
IFSM 304 (3) <i>Or other second computing course</i>		UL
<b>ADDITIONAL REQUIRED COURSES FOR MAJOR AND DEGREE (18 credits)</b>		
WRTG 393 or WRTG 393X (3) <i>Or other upper-level advanced writing GER course</i>		UL
◆ BIOL 350 (3) <i>Required for major</i>		UL
◆ BIOL 400 (3) <i>Required for major</i>		UL
◆ BIOL 362 (3) <i>Or other supplemental course for the major (BIOL 320, 330-339; 350-359, 362, 422, 430-439; NSCI 301; or additional 3-credit co-op internship)</i>		UL
◆ BIOL 320 (3) <i>Or other supplemental course for the major</i>		UL
◆ BIOL 422 (3) <i>Or other supplemental course for the major</i>		UL
<b>INTERNSHIP FOR MAJOR (6 credits) Complete in last 30 credits for major</b>		
◆ 6-credit internship through Cooperative Education <i>Required for major. Courses numbered 486 A or B in any discipline, but learning proposal must show relationship biotechnology major. Note: additional internships may be used in supplemental credits but maximum total internship credits in degree is 15 credits</i>		UL ----- UL
<b>MINOR OR ELECTIVES (15 credits, at least 9 credits upper level for minor) Complete in last 60 hours along with major courses.</b>		
See requirements of individual minor.		UL
		UL
		UL
<b>ADDITIONAL ELECTIVES (5-6 credits)</b>		
Choose any courses to meet 120 credits for degree. Note minimum requirements for upper-level coursework.		UL
<b>TOTAL: 120 CREDITS</b>		
<b>CHECKLIST FOR FULFILLMENT OF DEGREE REQUIREMENTS See catalog for overview of all requirements.</b>		
<input type="checkbox"/> 30 credits at UMUC, including at least half of the major and minor and 15 upper level credits. <input type="checkbox"/> 45 upper-level credits, including half the credit for the major and the minor. <input type="checkbox"/> All required courses <u>and</u> minimum number of credits for major and minor. <input type="checkbox"/> Prerequisites for major and minor courses, if needed.	<input type="checkbox"/> All General Education Requirements. <input type="checkbox"/> Grade of C or better in all courses for the major and minor. <input type="checkbox"/> Overall GPA of at least 2.0. <input type="checkbox"/> At least half the credit for the major earned through graded coursework. <input type="checkbox"/> Total 120 credits.	
NOTES:		